

Mixed Urinary Incontinence Symptoms in Women with Prolapse

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Objective: To describe the prevalence of mixed urinary incontinence (MUI) symptoms and the relationship to leading edge of prolapse in women with prolapse.

Methods:

In this IRB-approved cross-sectional study, 336 women presenting for urogynecologic evaluation with POPQ \geq stage I were enrolled. All participants completed the Pelvic Floor Distress Inventory (PFDI) prior to evaluation and underwent the Pelvic Organ Prolapse Quantification (POP-Q) examination and simple cystometry or multiple channel urodynamics (UDS). MUI was defined as at least one “yes” response to questions in both the Irritative and Stress Urinary Distress Inventory (UDI) subscale of the PFDI. Urge-predominant MUI was defined as Irritative > Stress on the UDI subscales. Stress-predominant MUI was defined as Stress > Irritative on the UDI subscales. Data analysis included Student’s t-test and linear regression.

Results:

Total study population by UDI symptoms groups were: MUI 242/336 (72%), urge-only 80/336 (24%), stress-only 1/336 (0.3%), and no UI symptoms 13/336 (3.7%). Women with MUI were included in the analysis. Participants with MUI were predominantly Caucasian 222/242 (94%), postmenopausal 183/242 (80%), and non-smokers 223/242 (93%). The following table describes study variables.

	MUI (n=242)	Urge-MUI (n=105/242)	Stress-MUI (n=137/242)	p-value
Age	61 \pm 13	65 \pm 12	58 \pm 13	<0.01
Prior hysterectomy	134/242 (55%)	62/105 (59%)	72/137 (53%)	0.30
Prior Prolapse procedure	42/242 (17%)	29/105 (28%)	26/137 (19%)	0.12
Prior Incontinence procedure	55/242 (23%)	16/105 (15%)	26/137 (19%)	0.45
Maximum leading edge of prolapse (cm)	2.3 \pm 2.6	2.6 \pm 2.6	2.1 \pm 2.5	0.12
PFDI total score	320 \pm 170	267 \pm 168	311 \pm 173	0.43
UDI total subscale score	110 \pm 50	78 \pm 50	111 \pm 53	0.32

Mean \pm SD

Linear regression modeling revealed a decrease in MUI and Stress-MUI symptoms as leading edge of prolapse increases ($p=0.01$ and <0.01 , respectively). For Urge-MUI, there was no change in symptoms as leading edge increases ($p=0.55$).

Conclusions:

The majority of women with prolapse have mixed urinary incontinence symptoms. On average, women with Stress-MUI are younger than women with Urge-MUI and as women age, urge symptoms appear to exceed stress symptoms. Stress-MUI symptoms decrease with increasing prolapse and Urge-MUI is unchanged by advancing prolapse.